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09/987,707	11/15/2001	Alan J. Lipton	37112-175340	7303

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VENABLE LLP
P.O. BOX 34385
WASHINGTON, DC 20045-9998

EXAMINER	
VO, TUNG T	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n N .	Applicant(s)	
	09/987,707	LIPTON ET AL.	
	Examiner	Art Unit	
	Tung Vo	2621	

-- Th MAILING DATE f this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-22 and 24-36* is/are pending in the application.

4a) Of the above claim(s) *2,3 and 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-22 and 24-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/05/2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4-11, 13-22, and 24-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Merheim et al. (US 2002/0135483).

Re claims 1, 22, 25, 26, 27, and 32, Merheim discloses a computer-readable medium comprising software (11 of fig. 2, Note computer code) for a video surveillance system (fig. 2), comprising code segments (11 of fig. 2, computer code) for operating the video surveillance

system based on video primitives, wherein the code segments for operating the video surveillance system comprise:

code segments for identifying one or more event discriminators (100-120 of fig. 3; see also [0013] and [0016] and [0061], *Note areas represent change of some kind that has occurred in the recorded image in comparison with the reference image; these changes can be that person has entered the monitored location or a tree is blowing in the wind in the monitored location*);

code segments for extracting video primitives (130-150 of fig. 3, [0061], *Note when the areas have been extracted, an object is associated with each area in an object extraction step (140 of fig. 3) for easier management of the different areas. Instead of storing images of an area, selected area characteristics are stored, such as one or more of, for example, coordinates in the image, size, outline, average intensity, circumference and intensity variations*; see also figs. 4-6); and

code segments for extracting event occurrences from the video primitives using at least one of the one or more event discriminators (160 of fig. 3 and 200, 210, and 220 of fig. 7; see also [0064]-[0065])

Re claim 4, Merheim further discloses code segments for archiving the extracted video primitives (140-150 of fig. 3).

Re claims 5 and 24, Merheim further discloses comprising code segments for undertaking a response based on extracted event occurrences (170 of fig. 3, [0066]).

Re claim 6, Merheim further discloses wherein the response comprises initiating another sensor system (12 of fig. 2).

Re claim 7, Merheim further discloses code segments for calibrating the video surveillance system ([0014], Note the monitoring system ***can be set up*** to classify the object as a human alarm object as soon as an object is determined to be a human object, but it ***can also be set up to classify the object*** as a human alarm object if the object is determined to be human and also fulfils some additional criterion, such as where in the image the human object is located).

Re claims 8, 28, and 33, Merheim further discloses wherein the code segments for calibrating comprise code segments for self-calibrating the application-specific hardware the video surveillance system ([0014], Note the monitoring system can be set up to classify objects).

Re claim 9, Merheim further discloses wherein the code segments for self-calibrating comprise: code segments for detecting as least one object in a source video (140, 150, and 160 of fig. 3) and code segments for tracking the object ([0064], Note by minimizing the matching difference for all objects at the same time, a good approximation is obtained of the object's previous history, which is known as tracking).

Re claim 10, Merheim further discloses wherein the code segments for detecting at least one object comprise; code segments for detecting at least one object via motion of the object (fig. 8, Note divergence image, motion object) and code segments for detecting at least one object via change in a background model ([0013]; fig. 8, Note background image).

Re claim 11, Merheim further discloses wherein the code segments for self-calibrating comprise code segments for identifying trackable areas ([0009]); and code segments for identifying typical sizes of typical objects ([0010], Note classifying in each of the monitoring modules the object, based on characteristics, such as a characteristic of the type: size, shape and/or movement history, associated with the object, if the object is a human alarm object).

Re claim 13, Merheim further discloses code segments for tasking the video surveillance system with event discriminators (170 of fig. 3).

Re claim 14, Merheim further discloses wherein the code segments for tasking comprise code segments for identifying at least one object (fig. 8, Note matching, the object's history).

Re claim 15, Merheim further discloses wherein the code segments for tasking comprise code segments for identifying at least one spatial area ([0007]).

Re claim 16, Merheim further discloses wherein the code segments for tasking comprise code segments for identifying at least one temporal attribute ([0036], Note date and time)

Re claim 17, Merheim further discloses wherein the code segments for tasking identify at least one interaction (vector and speed of the object, [0027]).

Re claim 18, Merheim further discloses wherein the code segments for tasking identify at least one alarm (170 of fig. 3, fig. 8, display of object of alarm operator).

Re claim 19, Ito further discloses wherein the video primitives are from at least one of a video sensor (7 of fig. 2) and another sensor (12 of fig. 2).

Re claim 20, Merheim further discloses wherein the video primitives (140 of fig. 3) are retrieved from an archive of video primitives (100 of fig. 3).

Re claim 21, Merheim further discloses a computer system comprising the computer-readable medium (11 of fig. 2, Note computer code) of claim 1.

Re claims 29-31 and 34-36, Ito further discloses wherein event occurrences are extracted based on video primitives and non-video primitives ([0013], Note moving objects and stationary objects); wherein at least one event discriminator includes at least two of the following: an object (140 of fig. 3, see also fig. 8), a spatial area (120 of fig. 3, see also fig. 8), a temporal attribute

(date and time, [0036]), an interaction , and an alarm (170 of fig. 3); wherein at least one event discriminator defines an interaction between one or more video primitives (150 and 160 of fig. 3, see also fig. 8), between one or more spatial areas of interest, and/or between one or more temporal areas of interest.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4-22, and 24-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al. (US 4,737,847) in view of Ito et al. (US 6,404,455).

Re claims 1, 12, 21-22, 25, 26, 27, and 32, Araki et al disclose a video surveillance system (figs. 87 and 88) for performing the information processing steps, comprising code segments for operating the video surveillance system based on video primitives (fig. 46), wherein the code segments for operating the video surveillance system comprise:

code segments for identifying one or more event discriminators (SETTING AREA of fig. 88; 296, 297, 299, and 300 of fig. 46; col. 19, line 55-col. 20-line 8);

code segments for extracting video primitives (PICTURE PROCESSING of fig. 88; See also 291 of fig. 46, Note object extraction and tracking, fig. 2); and

code segments for extracting event occurrences (INTRUDER DISCRIMINATION of fig. 88, See also 292 of fig. 46) from the video primitives (291 of fig. 46) using at least one of the one or more event discriminators (299, 300, and 297 of fig. 46).

It is noted that Araki et al suggest while the present invention shall now be described with reference to the preferred embodiments shown in the drawings, it should be understood that the intention is not to limit the invention only to the particular embodiments shown but rather to cover all alterations, modifications and equivalent arrangements possible within the scope of appended claims. However, Araki et al do not particularly disclose a computer readable medium encoded software comprising code segments for calibrating comprise code segments for manual calibration; code segments for semi-automatic calibration and code segments for automatic calibration as claimed.

Ito teaches a computer readable medium (10 of fig. 1) encoded software comprising code segments for operating the CPU (6 of fig. 1), code segments for calibrating comprise code segments for manual calibration (col. 12, lines 21-25); wherein code segments for semi-automatic calibration and code segments for automatic calibration (col. 12, lines 26-29, Note the foregoing description about the system for processing the tracking picture of the entering object is concerned with the process of enabling the pan and tilt head control unit (8 of fig. 1) to output a zooming control signal for controlling the zoom lens (16 of fig. 1) and thereby automatically magnifying the image on the screen. Alternatively, the zooming control signal manually controlled by the observer may be inputted to the pan and tilt head control unit 8 through the external I/F (11 of fig. 1). This is a manual adjustment of the magnified image).

Therefore, taking the teachings of Araki and Ito as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Ito into the system of Araki in order to provide a picture processing system for tracking an entering object by automatically detecting the entering object and magnifying the detected entering object, for allowing an observer to more easily make sure of the entering object on a video monitor screen.

Re claim 4, Araki et al further disclose code segments for archiving the extracted video primitives (OPERATION & INTRUDER (POSITION, SIZE, and SPEED) of fig. 88; 291c of fig. 46).

Re claims 5 and 24, Araki et al further disclose further comprising code segments for undertaking a response based on extracted event occurrences (QUESTION & ANSWER of fig. 88, 292 of fig. 4).

Re claim 6, Araki et al further disclose wherein the response comprises initiating another sensor system (136 of fig. 19, Note alarm sensors).

Re claim 7, Araki et al further disclose code segments for calibrating the video surveillance system (INTRUDER or OBJECT: POSITION, SIZE, and SPEED of fig. 28; see also fig. 2, Note object extraction and frame tracking).

Re claims 8, 28, and 33, Araki et al further disclose wherein the code segments for calibrating comprise code segments for self-calibrating the application-specific hardware (291 of fig. 46, see also fig. 2) the video surveillance system.

Re claim 9, Araki et al further disclose wherein the code segments for self-calibrating comprise: code segments for detecting as least one object in a source video (291c of fig. 1, wherein the picture processing is described in fig. 2, SUBSTRACT, FILTERING, SLICING of

fig. 2), and code segments for tracking the object (FRAME TRACKING of fig. 2; Note this picture processing procedure is executed for each input picture frame, and thus processed object is subjected to a frame tracking and is provided, together with a warning level value later described in the monitoring zone, to an abnormality discrimination means (12 of fig. 1 or 22 of fig. 4) of a unique arrangement in the present invention, see also 438 of fig. 70).

Re claim 10, Araki et al further disclose wherein the code segments for detecting at least one object comprise; code segments for detecting at least one object via motion of the object (INTRUDER: position, size and speed of fig. 88); and code segments for detecting at least one object via change in a background model (SETTING AREA of 88, Note setting up different background model).

Re claim 11, Araki et al further disclose wherein the code segments for self-calibrating comprise code segments for identifying trackable areas (438 of fig. 70); and code segments for identifying typical sizes of typical objects (INTRUDER: SIZE of fig. 88).

Re claim 13, Araki et al further disclose code segments (INTRUDER DISCRIMINATION of fig. 88, 291c and 292 of fig. 46; 11 and 12 of fig. 4) for tasking the video surveillance system with event discriminators.

Re claim 14, Araki et al further disclose wherein the code segments for tasking comprise code segments for identifying at least one object (col. 5, lines 47-53).

Re claim 15, Araki et al further disclose wherein the code segments for tasking comprise code segments for identifying at least one spatial area (predetermined area, SETTING AREA of fig. 88, fig. 47).

Re claim 16, Araki et al further disclose wherein the code segments for tasking comprise code segments for identifying at least one temporal attribute (151e, TIMER, of fig. 22)

Re claim 17, Araki et al further disclose wherein the code segments for tasking identify at least one interaction (fig. 47).

Re claim 18, Araki et al further disclose wherein the code segments for tasking identify at least one alarm (298 of fig. 46, see also figs. 5, 5, 8, 10).

Re claim 19, Araki et al further disclose wherein the video primitives are from at least one of a video sensor (290 of fig. 46) and another sensor (136 of fig. 19).

Re claim 20, Araki et al further disclose wherein the video primitives are retrieved from an archive of video primitives (224 of fig. 32).

Re claims 29-31 and 34-36, Araki et al further disclose wherein event occurrences are extracted based on video primitives and non-video primitives (fig. 3); wherein at least one event discriminator (12 of fig. 1, 22 of fig. 4) includes at least two of the following: an object (INTRUDER of fig. 88), a spatial area (SETTING AREA of fig. 88), a temporal attribute (fig. 22), an interaction (fig. 71-74), and an alarm (28 of fig. 4); wherein at least one event discriminator (22 of fig. 4) defines an interaction between one or more video primitives, between one or more spatial areas of interest (26-27 of fig. 4, fig. 5 for warning levels), and/or between one or more temporal areas of interest (Timer of fig. 22).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pavilidis et al. (US 2003/0053659) discloses moving object assessment system and method.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tung Vo
Primary Examiner
Art Unit 2621